

Title (en)
PREPARATION OF STABLE CARBON NANOTUBE DISPERSIONS IN LIQUIDS

Title (de)
HERSTELLUNG VON STABILEN DISPERSIONEN VON KOHLENSTOFFNANORÖHRCHEN IN FLÜSSIGKEITEN

Title (fr)
PREPARATION DE DISPERSIONS DE NANOTUBES DE CARBONE STABLES DANS LES LIQUIDES

Publication
EP 1495171 A1 20050112 (EN)

Application
EP 02804723 A 20021206

Priority
• US 0238643 W 20021206
• US 2176701 A 20011212

Abstract (en)
[origin: WO03050332A1] The introduction of nanotubes in a liquid provides a means for changing the physical and/or chemical properties of the liquid. Improvements in heat transfer, electrical properties, viscosity, and lubricity can be realized upon dispersion of nanotubes in liquids; however, nanotubes behave like hydrophobic particles and tend to clump together in liquids. Methods of preparing stable dispersions of nanotubes are described and surfactants/dispersants are identified which can disperse carbon nanotubes in aqueous and petroleum liquid medium. The appropriate dispersant is chosen for the carbon nanotube and the water or oil based medium and the dispersant is dissolved into the liquid medium to form a solution. The carbon nanotube is added to the dispersant containing the solution with agitation, ultrasonication, and/or combinations thereof.

IPC 1-7
D01F 9/12

IPC 8 full level
D01F 9/12 (2006.01); **C10M 125/02** (2006.01); **C10M 141/00** (2006.01); **C10M 171/06** (2006.01); **D01F 9/127** (2006.01)

CPC (source: EP)
B82Y 30/00 (2013.01); **C10M 125/02** (2013.01); **C10M 141/00** (2013.01); **C10M 171/06** (2013.01); **D01F 9/127** (2013.01); **C10M 2201/02** (2013.01); **C10M 2201/041** (2013.01); **C10M 2209/108** (2013.01)

Cited by
US5932276A; EP1995274A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)
WO 03050332 A1 20030619; AU 2002357065 A1 20030623; AU 2002357065 B2 20080904; BR 0215135 A 20050104; BR 0215135 B1 20141216; CA 2470113 A1 20030619; CA 2470113 C 20110125; CN 1304657 C 20070314; CN 1617958 A 20050518; EP 1495171 A1 20050112; EP 1495171 A4 20080402; MX PA04005761 A 20041101; NZ 533941 A 20060929

DOCDB simple family (application)
US 0238643 W 20021206; AU 2002357065 A 20021206; BR 0215135 A 20021206; CA 2470113 A 20021206; CN 02828007 A 20021206; EP 02804723 A 20021206; MX PA04005761 A 20021206; NZ 53394102 A 20021206